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Acquisition of Oceanographic Measurements from Baleen Whales

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LONG-TERM GOALS

To use large baleen whales as oceanographic sampling platforms and understand how they use oceanographic features to navigate and find prey.

OBJECTIVES

To develop and calibrate satellite transmitters for baleen whales that can collect and transmit data on location, depth, temperature and salinity.

APPROACH

This project is carried out in cooperation with Mads Peter Heide-Jørgensen (Greenland Insitute for Natural Resources) and Gisli Vikingsson (Marine Research Institute, Iceland). The study will address the objective by cooperation with the two main manufacturers of satellite transmitters for marine mammals (Sea Mammal Research Unit (SMRU, www.smru.st-andrews.ac.uk), University of St. Andrews, Scotland and Wildlife Computers (WC, www.wildlifecomputers.com), Seattle, USA). New types of CTD ocenagraphic tags will be developed for baleen whales.

WORK COMPLETED

Nothing has been completed yet as the project has just gotten started.

RESULTS

The project has just started by reviewing litterature and arranging meetings in October and December 2013 with Wildlife Computers. Contact have been made with a newly funded ONR-project lead by Lars Boehme from SMRU with the aim to modify and improve an existing electrode based miniature conductivity-temperature sensor and incorporate it into the proven design of a Satellite Relay Data Logger. The developent of this project will be followed closely and it is the hope that this new logger will benefit the present project.

IMPACT/APPLICATIONS

No satellite based CTD tags have been developed for long term deployment in baleen whales. The main outcome of the project will be a newly developed and tested CTD tags from Wildlife Computers that can be deployed on large baleen whales either by pole or by the ARTS. A deployment system for the SMRU CTD tag will also be developed and documented.

TRANSITIONS

The tags developed will be commercially available from the manufacturers for all research groups interested after completion of this project.

RELATED PROJECTS

A newly funded ONR-project lead by Lars Boehme from SMRU with the aim to modify and improve an existing electrode based miniature conductivity-temperature sensor and incorporate it into the proven design of a Satellite Relay Data Logger. The developent of this project will hopefully bennefit our project.